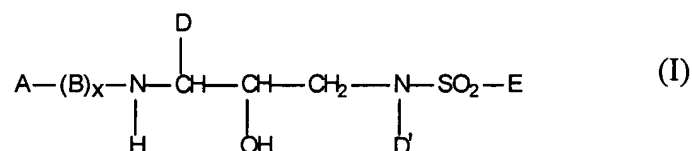


Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (previously presented): A compound of formula I:



wherein:

A is selected from the group consisting of $-\text{R}^1-\text{C}_1-\text{C}_6$ alkyl, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C_1-C_4 alkoxy, $-\text{NR}^2-\text{CO}-\text{N}(\text{R}^2)(\text{R}^2)$ and $-\text{CO}-\text{N}(\text{R}^2)(\text{R}^2)$;

each R^1 is independently selected from the group consisting of $-\text{C}(\text{O})-$, $-\text{S}(\text{O})_2-$, $-\text{C}(\text{O})-\text{C}(\text{O})-$, $-\text{O}-\text{C}(\text{O})-$, $-\text{O}-\text{S}(\text{O})_2-$, $-\text{NR}^2-\text{S}(\text{O})_2-$, $-\text{NR}^2-\text{C}(\text{O})-$ and $-\text{NR}^2-\text{C}(\text{O})-\text{C}(\text{O})-$;

each Het is independently selected from the group consisting of C_3-C_7 cycloalkyl; C_5-C_7 cycloalkenyl; C_6-C_{10} aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one heteroatom selected from N, $\text{N}(\text{R}^2)$, O, S and $\text{S}(\text{O})_n$, wherein said heterocycle may optionally be benzofused; and wherein any member of said Het

may be optionally substituted with one or more substituents selected from the group consisting of oxo, $-OR^2$, $-R^2$, $-N(R^2)(R^2)$, $-R^2-OH$, $-CN$, $-CO_2R^2$, $-C(O)-N(R^2)(R^2)$, $-S(O)_2-N(R^2)(R^2)$, $-N(R^2)-C(O)-R^2$, $-C(O)-R^2$, $-S(O)_n-R^2$, $-OCF_3$, $-S(O)_n-Ar$, methylenedioxy, $-N(R^2)-S(O)_2(R^2)$, halo, $-CF_3$, $-NO_2$, Ar and $-O-Ar$;

each R^2 is independently selected from the group consisting of H and C_1 - C_3 alkyl optionally substituted with Ar; with the proviso that when R^2 is C_1 - C_3 alkyl substituted with Ar, said Ar may not be substituted with an Ar-containing moiety;

B, when present, is $-N(R^2)-C(R^3)(R^3)-C(O)-$;

x is 0 or 1;

each R^3 is independently selected from the group consisting of H, Het, C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_3 - C_6 cycloalkyl and C_5 - C_6 cycloalkenyl, wherein any member of said R^3 , except H, may be optionally substituted with one or more substituents selected from the group consisting of $-OR^2$, $-C(O)-NH-R^2$, $-S(O)_n-N(R^2)(R^2)$, Het, $-CN$, $-SR^2$, $-CO_2R^2$, $NR^2-C(O)-R^2$;

each n is independently 1 or 2;

D and D' are independently selected from the group consisting of Ar; C_1 - C_4 alkyl, which may be optionally substituted with one or more groups selected from C_3 - C_6 cycloalkyl, $-OR^2$, $-R^3$, $-O-Ar$ and Ar; C_2 - C_4 alkenyl, which may be optionally substituted with one or more groups selected from the group consisting of C_3 - C_6 cycloalkyl, $-OR^2$, $-R^3$, $-O-Ar$ and Ar; C_3 - C_6 cycloalkyl, which may be optionally substituted with or fused with Ar; and C_5 - C_6 cycloalkenyl, which may be optionally

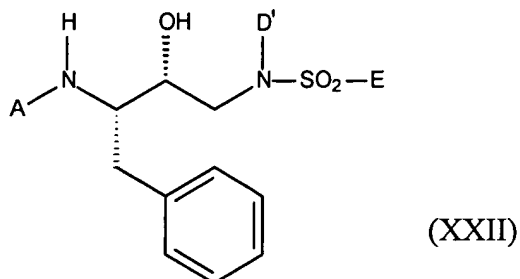
substituted with or fused with Ar;

each Ar is independently selected from the group consisting of phenyl; 3-6 membered carbocyclic ring, wherein said carbocyclic ring may be saturated or unsaturated and optionally substituted with one or more groups selected from the group consisting of oxo, $-OR^2$, $-R^2$, $-N(R^2)(R^2)$, $-N(R^2)-C(O)-R^2$, C_1-C_3 alkyl substituted with -OH and optionally substituted with Ar, $-CN$, $-CO_2R^2$, $-C(O)-N(R^2)(R^2)$, halo and $-CF_3$;

E is selected from the group consisting of Het; O-Het; Het-Het; $-O-R^3$; $-NR^2R^3$; C_1-C_6 alkyl, which may be optionally substituted with one or more groups selected from the group consisting of R^4 and Het; C_2-C_6 alkenyl, which may be optionally substituted with one or more groups selected from the group consisting of R^4 and Het; C_3-C_6 saturated carbocycle, which may optionally be substituted with one or more groups selected from the group consisting of R^4 and Het; and C_5-C_6 unsaturated carbocycle, which may optionally be substituted with one or more groups selected from the group consisting of R^4 and Het; and

each R^4 is independently selected from the group consisting of $-OR^2$, $-C(O)-NHR^2$, $-S(O)_2-NHR^2$, halo, $-NR^2-C(O)-R^2$ and $-CN$.

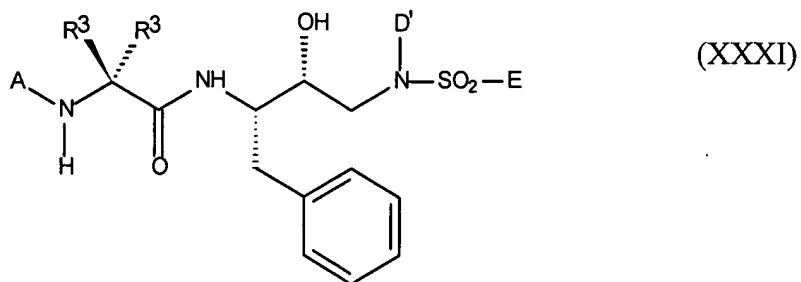
Claim 2 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXII:



and A, D' and E are defined as in claim 1.

Claim 3 (canceled).

Claim 4 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXXI:



and A, R³, D' and E are defined as in claim 1.

Claim 5 (previously presented): A compound of formula I, wherein:

A is selected from the group consisting of $-R^1-C_1-C_6$ alkyl, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C_1-C_4 alkoxy;

each R^1 is independently selected from the group consisting of $-C(O)-$, $-S(O)_2-$, $-C(O)-C(O)-$, $-O-CO-$, $-O-S(O)_2-$ and $-NR^2-S(O)_2-$;

each Het is independently selected from the group consisting of C_3-C_7 cycloalkyl; C_5-C_7 cycloalkenyl; C_6-C_{10} aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one heteroatom selected from N, O and S, which may optionally be benzofused; wherein any member of said Het may be optionally substituted with one or more substituents selected from the group consisting of oxo, $-OR^2$, $-R^2$, $-N(R^2)_2$, $-R^2-OH$, $-CN$, $-CO_2R^2$, $-C(O)-N(R^2)_2$ and $-S(O)_2-N(R^2)_2$;

each R^2 is independently selected from the group consisting of H and C_1-C_3 alkyl;

B, when present, is $-NH-CH(R^3)-C(O)-$;

x is 0 or 1;

R^3 is selected from the group consisting of Het, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_3-C_6 cycloalkyl and C_5-C_6 cycloalkenyl, wherein any member of said R^3 may be optionally substituted with one or more substituents selected from the group consisting of $-OR^2$, $-C(O)-NH-R^2$, $-S(O)_n-N(R^2)_2$, Het and $-CN$;

n is 1 or 2;

D and D' are independently selected from the group consisting of Ar; C₁-C₄ alkyl, which may be optionally substituted with C₃-C₆ cycloalkyl or Ar; C₂-C₄ alkenyl, which may be optionally substituted with C₃-C₆ cycloalkyl or Ar; C₃-C₆ cycloalkyl, which may be optionally substituted or fused with Ar; and C₅-C₆ cycloalkenyl, which may be optionally substituted or fused with Ar;

Ar is selected from the group consisting of phenyl; 3-6 membered carbocyclic ring wherein said carbocyclic ring may be saturated or unsaturated and optionally substituted with one or more groups selected from the group consisting of oxo, -OR², -R², -N(R²)₂, -N(R²)-C(O)R², -R²-OH, -CN, -CO₂R², -C(O)-N(R²)₂, halo and -CF₃;

E is selected from the group consisting of Het; -O-R³; -NR²R⁵; C₁-C₆ alkyl, which may be optionally substituted with one or more R⁴ or Het; C₂-C₆ alkenyl, which may be optionally substituted with one or more R⁴ or Het; C₃-C₆ saturated carbocycle, which may optionally be substituted with one or more R⁴ or Het; and C₅-C₆ unsaturated carbocycle, which may optionally be substituted with one or more R⁴ or Het;

each R⁴ is independently selected from the group consisting of -OR², -C(O)-NHR², -S(O)₂-NHR², halo and -CN; and

each R⁵ is independently selected from the group consisting of H and R³.

Claim 6 (canceled).

Claim 7 (currently amended): The compound according to claim 1 3, wherein:

R³ is selected from the group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₅-

C₆ cycloalkyl, C₅-C₆ cycloalkenyl and a 5-6 membered saturated or unsaturated heterocycle, wherein any member of said R³ may optionally be substituted with one or more substituents selected from the group consisting of -OR², -C(O)-NH-R², -S(O)_nN(R²)(R²), Het, -CN, -SR², -C(O)₂R², NR²-C(O)-R²; and

D' is selected from the group consisting of C₁-C₃ alkyl and C₃ alkenyl, wherein said alkyl or alkenyl may optionally be substituted with one or more groups selected from the group consisting of C₃-C₆ cycloalkyl, -OR², -O-Ar and Ar.

Claims 8-10 (canceled).

Claim 11 (original): The compound according to claim 1, wherein said compound has a molecular weight less than or equal to about 700 g/mol.

Claim 12 (currently amended): A The compound according to claim 11, wherein said compound has a molecular weight less than or equal to about 600 g/mol.

Claims 13-15 (canceled).

Claim 16 (withdrawn – currently amended): A pharmaceutical composition effective against viral infection comprising a pharmaceutically effective amount of a compound according to any one of claims 1-2 or 4 and a pharmaceutically acceptable carrier, adjuvant or vehicle.

Claim 17 (withdrawn): The pharmaceutical composition according to claim 16, further comprising an additional anti-viral agent.

Claim 18 (withdrawn - currently amended): A method of using a compound according to any one of claims 1-4, 1-2, 4-5 or 7 as a therapeutic agent against viral infection, said virus requiring an aspartyl protease for an obligatory life cycle event.

Claim 19 (withdrawn): The method according to claim 18, wherein said virus is HIV-1, HIV-2, or HTLV.

Claim 20 (withdrawn - currently amended): A method of ~~The use according to any one of claims 1-4,~~ for inhibiting enzymatic activity in an aspartyl protease comprising the step of contacting the aspartyl protease with a compound according to any one of claims 1-2, 4-5 or 7.

Claim 21 (withdrawn – currently amended): ~~The use~~ method according to claim 20, wherein said aspartyl protease is HIV protease.

Claim 22 (withdrawn – currently amended): A method for preventing HIV infection in a mammal comprising the step of administering to said mammal a pharmaceutically effective amount of a compound ~~pharmaceutical composition~~ according to any one of claims 1-2, 4-5 or 7 ~~claim 16 or 17.~~

Claim 23 (withdrawn – currently amended): A method for treating HIV infection in a mammal comprising the step of administering to said mammal a pharmaceutically effective amount of a compound ~~pharmaceutical composition~~ according to any one of claims 1-2, 4-5 or 7 ~~claim 16 or 17.~~

Appl'n No. 10/786,997
Amendment and Reply dated 6/20/06
Reply to Office Action of 12/20/05

Claim 24 (withdrawn): The method according to claim 22 or 23, wherein said step of administering comprises oral administration or administration by injection.

Claims 25-27 (canceled).